

# Appendix G: General Approach for Calculating the Overall Operating Costs for an Existing Air Force Utility

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Operating costs include operations, maintenance, and general and administrative costs. Typically these costs for the status quo operation of an Air Force utility are not maintained in one set of books for the utility. It is therefore necessary to obtain the information through detailed review of various financial records kept at each installation. Financial records on utility operating costs vary from installation to installation.

Typically, the Installation Civil Engineer Resource Flight collects the in-house cost of operating and maintaining utility systems in cost account codes (CAC). The applicable CACs are then used with estimates of other contributing costs in the Rate Set-Up Sheet to determine the rates the installation will be reimbursed by various classes of users (e.g., non federal, non appropriated fund). The Installation Civil Engineer cost report breaks down the three main cost elements of the CAC into labor, materials, or service contracts. The specific costs to be collected in the various CACs are described in Air Force Instructions (AFI) 32-1061.

The reasonableness of the CAC cost elements along with the estimates of the other contributing costs should be evaluated based on information gained through a charrette with the engineering section, shop superintendents, maintenance engineering, material control, production control, and resources. A charrette is an intensive on-site series of interviews between the analyst and the user or users, interested installation offices, the Installation Civil Engineer staff, and the privatization project management team. The purpose of the charrette is to fully develop and quantify all utility system costs using a list of questions provided earlier to the installation as a starting point. If any of the cost elements in the CAC are suspected to be incomplete, then the record costs need to be modified to include the actual support cost. Potential areas where the direct labor or other direct support to the utility are not charged and collected in the appropriate CAC include, but are not limited to the following:

- Where the shop/section providing the direct support is functioning as an estimated cost center and actual time is not tracked
- The shop/section providing the direct support is consolidated with other shops and work orders are not identified to the correct CAC
- Other direct cost such as materials, use of government vehicles, depreciable equipment, other utilities, and service contracts are not charged to work orders or included in the shop rate for that cost center

To adjust the CAC, the additional direct support can be estimated from the information gathered during the interviews. The additional labor cost is then computed by multiplying

the manhours dedicated to supporting the utility by the appropriate shop rate. Other costs not collected in the Installation Civil Engineer cost report, are simply directly added to the appropriate cost.

The following case studies provide examples of modified CACs that were developed to determine the real operations and maintenance cost for a utility system:

**CASE 1.) A RATE SET UP SHEET AND INSTALLATION CIVIL ENGINEER COST REPORT IDENTIFIED THE OPERATING COST FOR A WASTEWATER TREATMENT PLANT (CAC 27000) WAS ONLY \$72K. HOWEVER, WHILE INTERVIEWING THE SUPERINTENDENT OF THE PLANT, IT WAS DETERMINED THAT THE PLANT IS STAFFED WITH EIGHT FULL TIME POSITIONS AT A SHOP RATE OF \$30PER HOUR. BY SIMPLY MULTIPLYING THE MANHOURS PER YEAR (2080) FOR THE FULL TIME EMPLOYEES TIMES THE POSITION AT THE PLANT AND THE APPROPRIATE SHOP RATE, THE LABOR COST ALONE CAME OUT TO APPROXIMATELY \$500K. ONCE THE CREDIBILITY OF THIS LINK IN THE INSTALLATION CIVIL ENGINEERING COST REPORT WAS DISCOVERED, THE ENTIRE CAC WAS EXAMINED AND ULTIMATELY RECONSTRUCTED.**

**CASE 2.) THE SAME INSTALLATION CIVIL ENGINEER COST REPORT DISCUSSED IN CASE 1, ALSO DID NOT IDENTIFY ANY SERVICE CONTRACT COST. HOWEVER, WHILE INTERVIEWING PERSONNEL IN THE ENVIRONMENTAL FLIGHT, IT WAS DISCOVERED THE ANNUAL SERVICE CONTRACT FOR THE GIVEN FACILITIES WAS APPROXIMATELY \$6K. THESE SERVICE CALLS WERE PAID FOR WITH AN IMPACT CARD BY THE VARIOUS FACILITY MANAGERS AND THEREFORE WERE NOT COLLECTED IN THE INSTALLATION CIVIL ENGINEER COST REPORT.**

**CASE 3.) A INSTALLATION CIVIL ENGINEER COST REPORT IDENTIFIED A MINIMAL OPERATING COST FOR THE EXTERIOR ELECTRIC DISTRIBUTION SYSTEM. WHILE INTERVIEWING THE EXTERIOR ELECTRIC SHOP AND PRODUCTION CONTROL STAFF, IT WAS DETERMINED THAT THE ACCURATE LABOR AND MATERIALS WERE CHARGED TO THE APPROPRIATE CAC. HOWEVER, IT WAS ALSO DISCOVERED THAT THE SHOP USES SEVERAL PIECES OF EXPENSIVE EQUIPMENT AND VEHICLES TO SPECIFICALLY SUPPORT THE MAINTENANCE OF THE OVERHEAD DISTRIBUTION SYSTEM. THE COST OF THIS EQUIPMENT AND VEHICLES WERE NOT CAPTURED IN THE INSTALLATION CIVIL ENGINEER COST REPORT. AS A RESULT, THE REPLACEMENT COST OF THE ITEMS WAS ESTIMATED AND THEN AMORTIZED OVER A SEVEN YEAR PERIOD TO ACCURATELY REFLECT THE ANNUAL COST OF EQUIPMENT AND VEHICLES.**

**CASE 4.) WHILE REVIEWING A WORK ORDER REPORT IDENTIFYING THE LABOR AND MATERIAL COST FOR AN EXTERIOR ELECTRIC SHOP, SEVERAL WORK ORDERS WERE FOUND TO HAVE MATERIAL COST OVER \$1K. SINCE MATERIAL COST EXCEEDING \$1K PER WORK ORDER IS CONSIDERED TO BE A CAPITAL RENEWAL AND NOT AN OPERATIONAL COST, THE CAC WAS MODIFIED TO REDUCE THE SUM OF THE WORK ORDERS THAT HAD MATERIAL COST WHICH EXCEEDED \$1K.**